US Environmental Protection Agency

Region 5

Electronic Data Checker Instructions

U.S. Environmental Protection Agency
Region 5, 77 West Jackson Boulevard
Chicago, IL 60604

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US ENVIRONMENTAL PROTECTION AGENCY – REGION 5
ELECTRONIC DATA CHECKER

Instructions

Two applications, the Electronic Laboratory Data Checker (ELDC) and the Electronic Field Data Checker (EFDC) have been made available to data providers in order to check their EDD files prior to submittal to EPA Region 5. The applications check the files to ensure they are formatted as described in the "Electronic Data Deliverable (EDD) Specification Manual". If the data checker detects errors, an error log is created that can be viewed in detail or summary mode to gain an understanding of the problem. After the errors are corrected, the ELDC and EFDC can be re-run to assure that no errors remain.

The ELDC is used to check 5 EDDs files and the EFDC is used to check the remaining 10 files. The EDD files checked by the ELDC and EFDC are presented in Table 1 and Table 2, respectively.

Table 1. EDD File Formats Checked by the ELDC

ELDC EDD File Format	EDD File Type
EPAR5CFM_v1	Chemistry Field Measurement
EPAR5SMP_v1	Chemistry Sample
EPAR5TRS_v1	Chemistry Test/Result
EPAR5TRSQC_v1	Chemistry Test/Result with QC Data
EPAR5BAT_v1	Batch

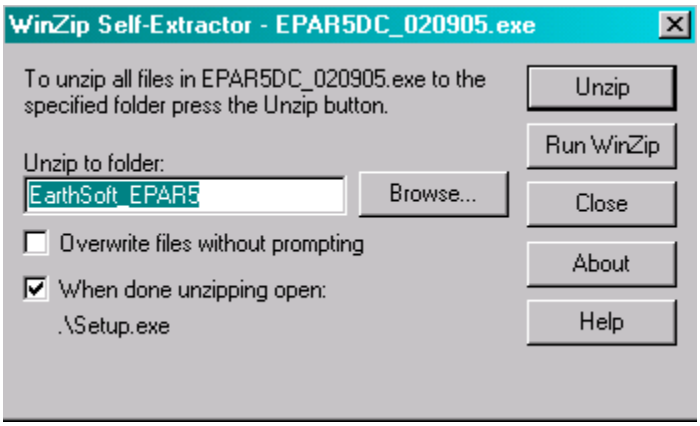
Table 2. EDD File Formats Checked by the EFDC

EFDC EDD File Format	EDD File Type
EPAR5SITE_v1	Site
EPAR5LOC_v1	Location
EPAR5GWTR_v1	Water Level
EPAR5DRA_v1	Drilling Activity
EPAR5LTH_v1	Lithology
EPAR5WEL_v1	Well
EPAR5WSG_v1	Well Construction
EPAR5GSMP_v1	Geology Samples
EPAR5TBL_v1	Water Table
EPAR5DHP_v1	Down Hole Point Data

INSTALLATION

Note: Uninstall any previously installed versions of the Region 5 ELDC and EFDC prior to installing the latest versions.

The installation file, *EPAR5DC_020905.exe*, for the ELDC and EFDC is provided on the EPA Region 5 EDMAN website at www.epa.gov/region5superfund/edman. To install the ELDC and EFDC, download the file and then simply double-click on the file.

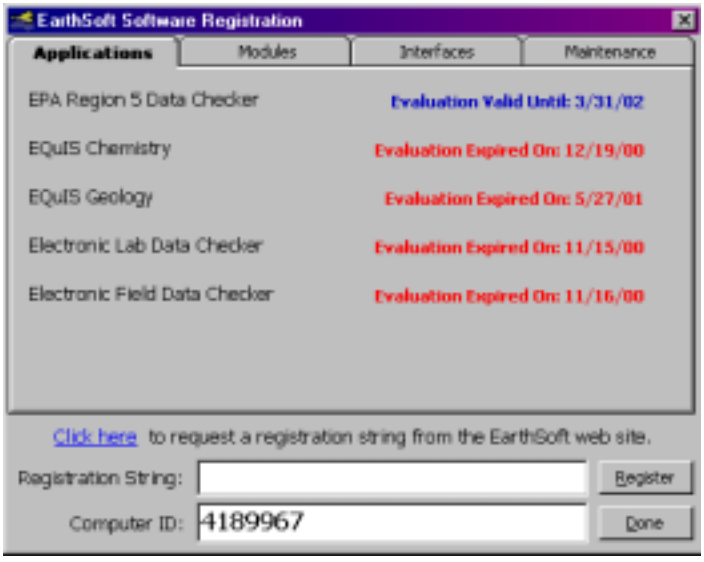


EPAR5DC_020905.exe will extract the installation files to either the default folder, EarthSoft_EPAR5, or another user specified folder. Click on "Unzip" to extract the 4 installation files. Once the files have been extracted, the installation should automatically begin. If it does not start automatically, double click *Setup.exe* located in the Earthsoft_EPAR5 folder.

The installation will then provide step by step instructions. Once installed, the ELDC and EFDC can be accessed by selecting Start/Programs/Earthsoft from the Windows Start-up menu.

Once the ELDC and EFDC are installed on a workstation, the user will be allowed to use the applications for 2 days. To use the applications after that, they will need to be registered. The first time either the ELDC or EFDC is started, the following screen will appear.

Click on the "Register" button. This will bring up the Software Registration screen.



Click on the "Click here" hyperlink. This will bring up the registration screen shown in Figure 1. If the registration screen in Figure 2 appears, click the "Click here to Register EPA Region 5 Data Checker" hyperlink. This will bring you to the registration screen shown in Figure 1. Fill out the required fields on the screen shown in Figure 1and then submit the information.

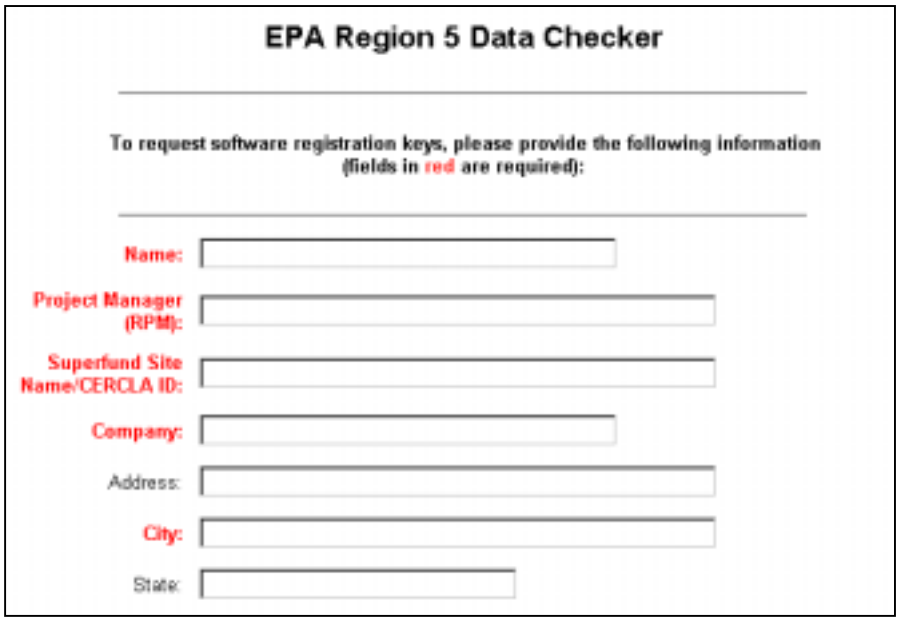
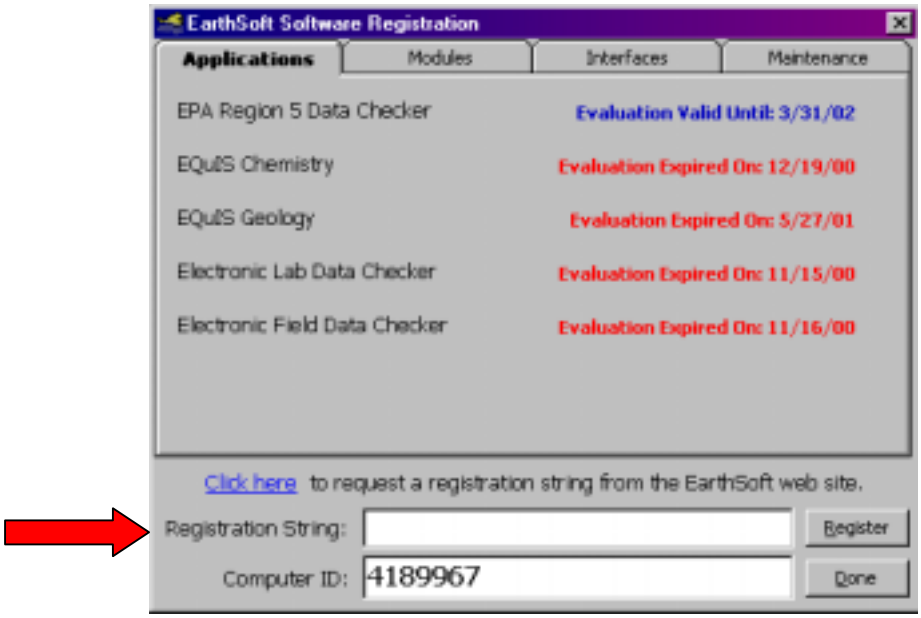


Figure 1

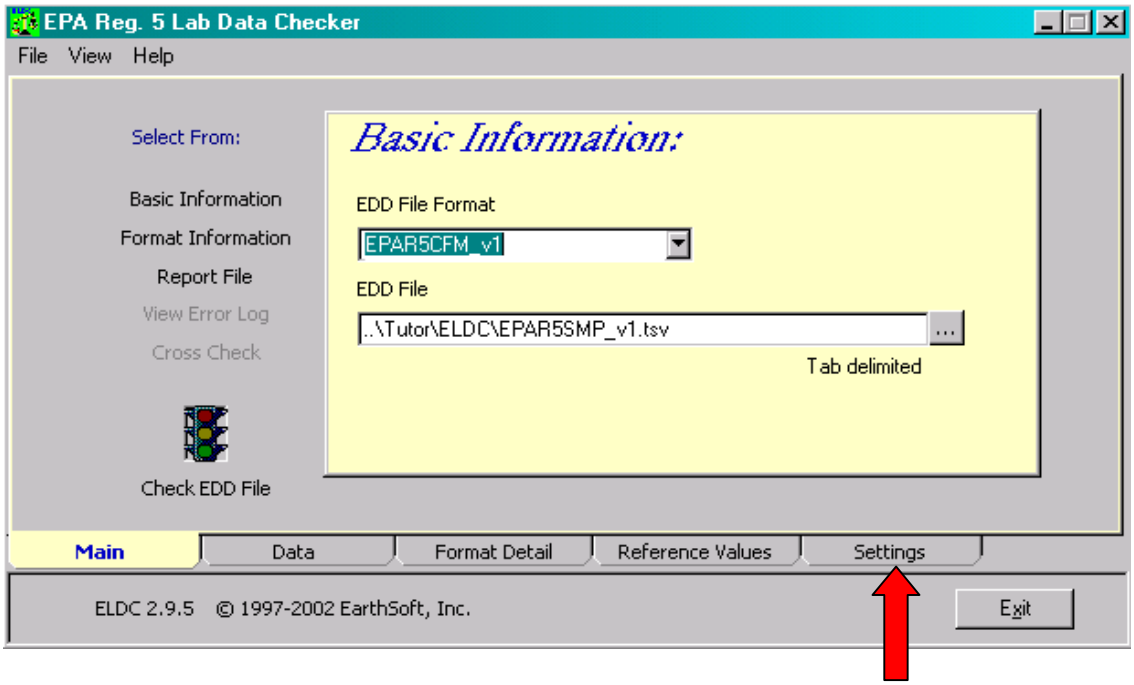
Figure 2

A registration key will then be e-mailed to the address entered on the submittal screen. The registration key should then be copied into the "Registration String" field of the ELDC registration screen. Click the "Register" button. The ELDC and EFDC should then be fully functional.

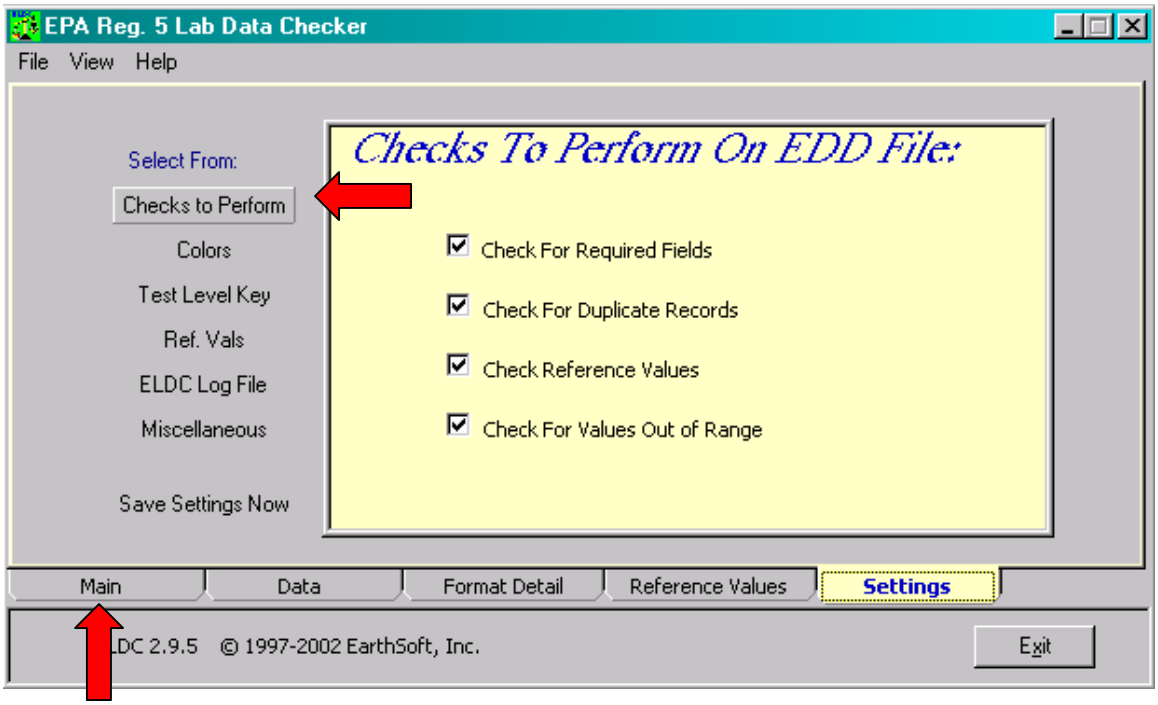


USING THE ELDC

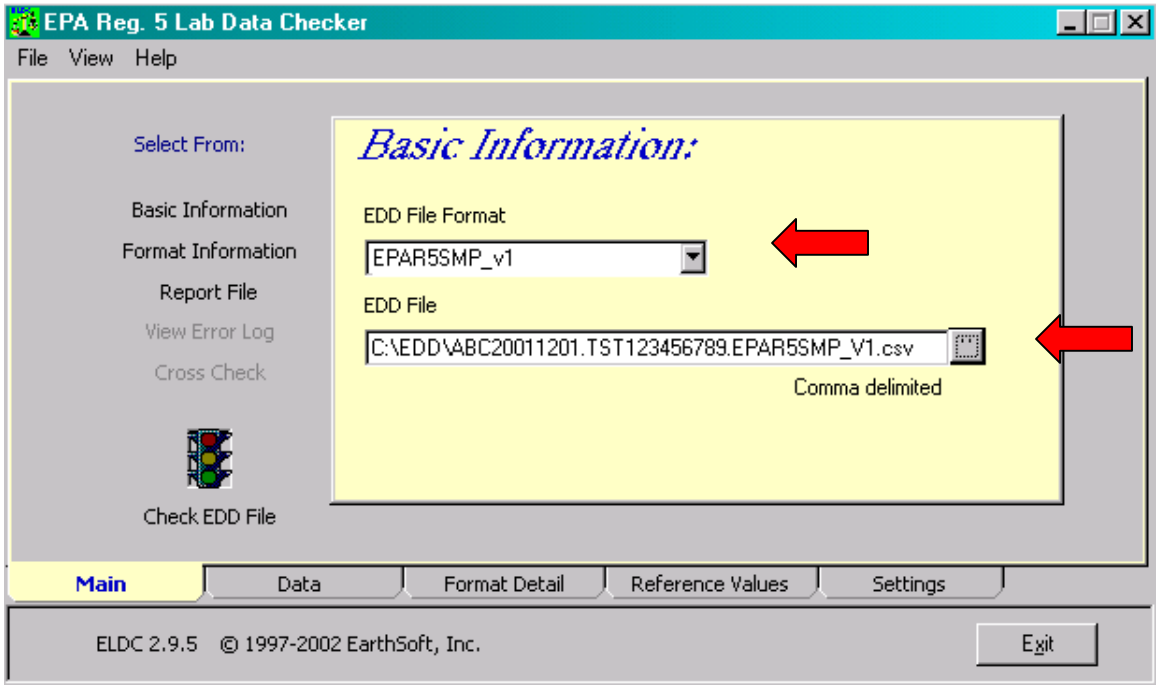
The ELDC is used to check the format, valid values, and parent/child relationships for the files identified in Table 1. When the ELDC starts, the following screen will appear.



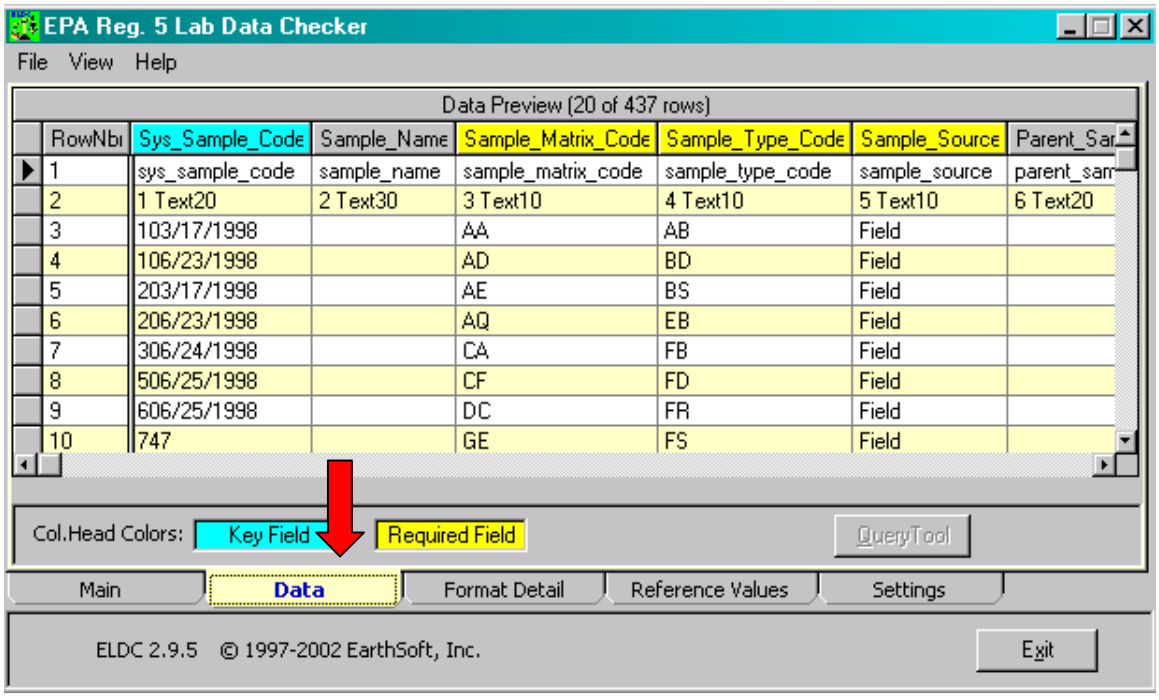
Select the "Settings" Tab, then select the "Checks to Perform" button located in the upper left portion of the window. Make sure all four settings are checked.



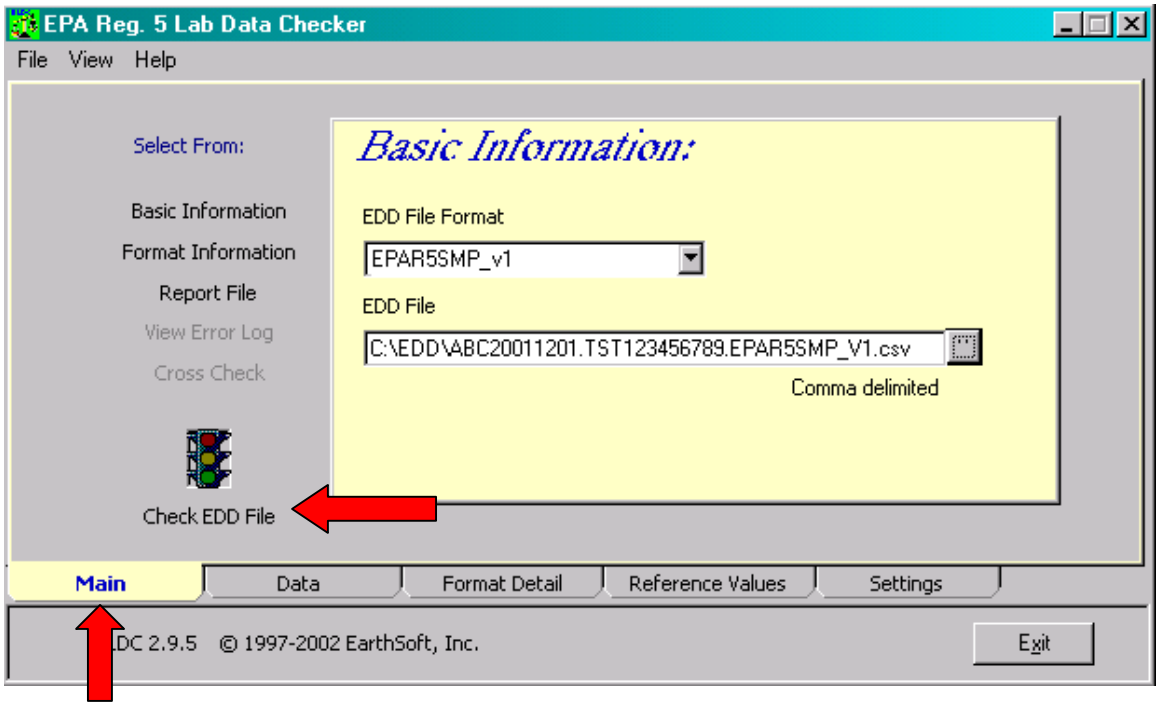
Select the “Main” tab to return the Basic Information window. The user is now ready to check the individual EDD files.



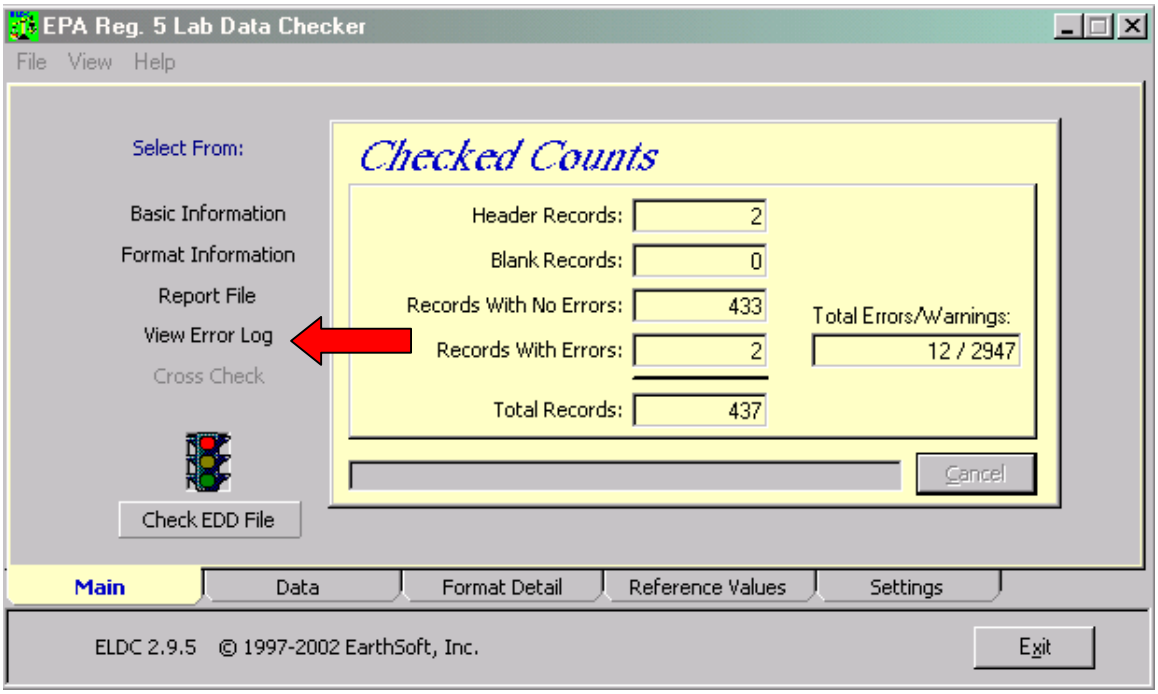
Select the EDD file format associated with the type of file that will be checked (e.g., EPAR5SMP_v1 for the chemistry sample file). Next, the EDD file is selected by using the standard browse function (e.g., ABC20011201.tst123456789.EPAR5SMP_V1.CSV). Select the “Data” Tab to view the EDD file.



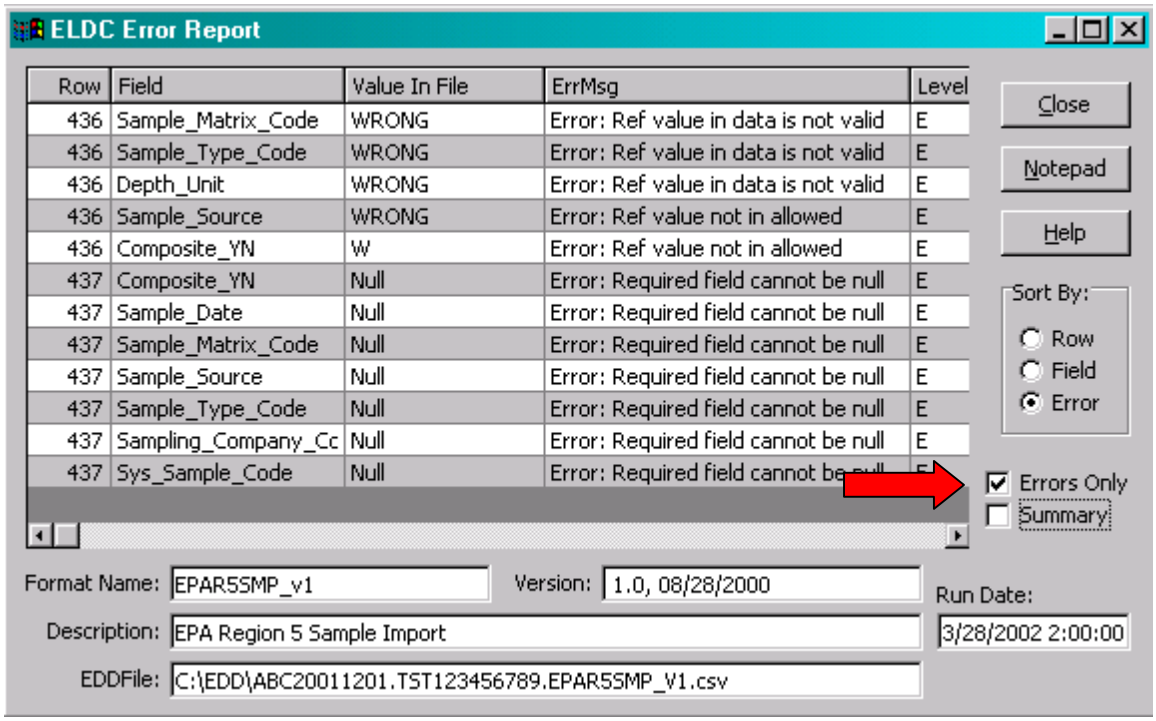
Make sure that the column headings line up. If they do not, check to see that you have chosen a matching file and file format. Return to the "Basic Information" window by clicking on the "Main" tab.



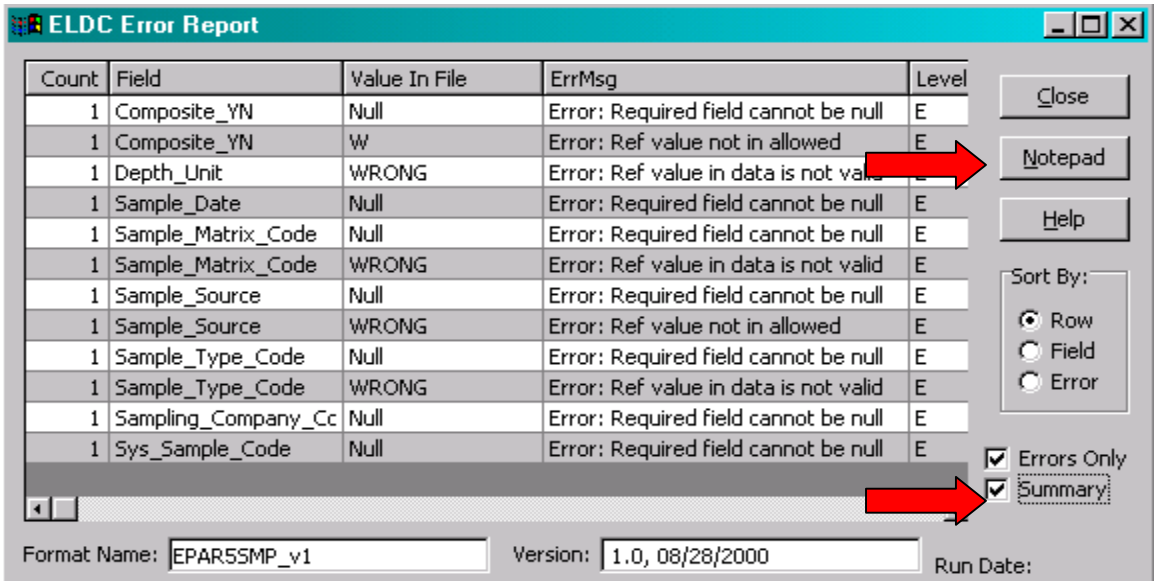
The file is now ready to be checked. Select the "Check EDD File" to start the checking process. The "Checked Counts" window appears after the file has been checked.



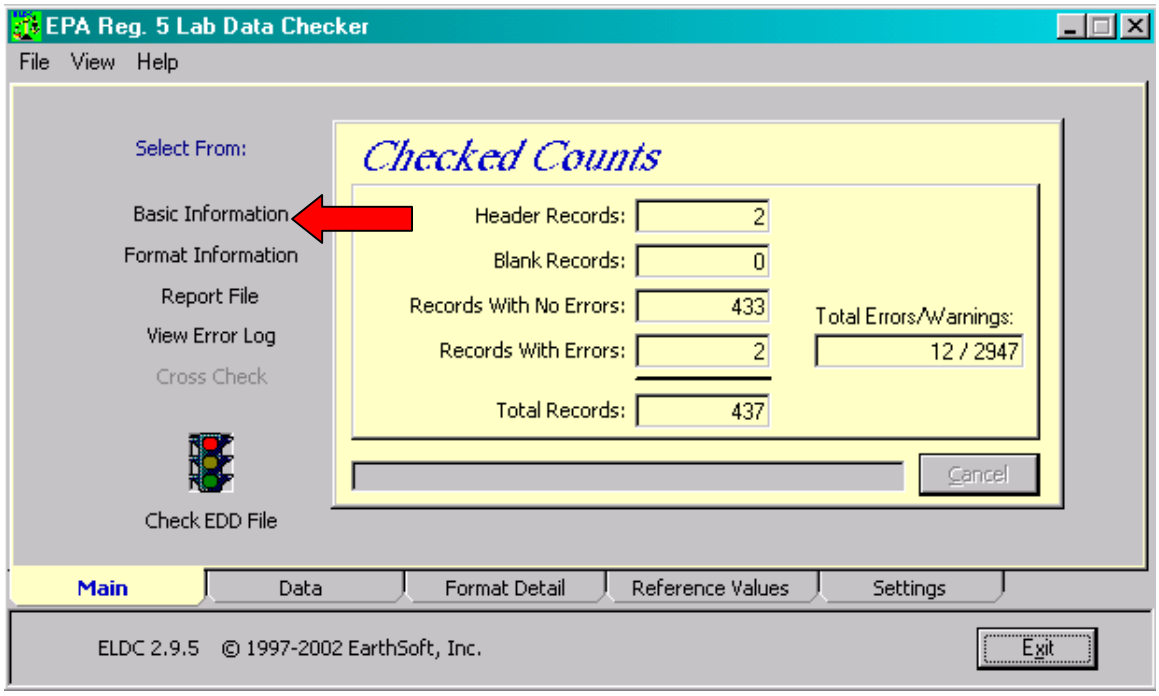
The “Checked Counts” window summarizes the results of the check. The above window shows that 437 records were checked. Of the 437 records, 2 were header records, 433 records had no errors, and 2 records had errors. To view the errors, select the “View Error Log” button located on the left side of the window.



Check the “Errors Only” box located in the lower right corner of the ELDC Error report window. All errors detected by the ELDC will be displayed by row number. The above window shows there were 5 errors in row 436 and 7 errors in row 437.



To see a summary of error types by field, select the “Summary” box located below the “Errors Only” box. You can view and save the error report by selecting the “Notepad” button located in the upper right corner of the window.



To get back to the “Basic Information” window, close the “ELDC Error Report” window and click on the “Basic Information” button.

USING THE CROSS CHECK FUNCTION

Once one file has been checked using the ELDC checking process the Cross Check button becomes available. The cross check function is used to check the parent/child relationships between the EPAR5SMP_V1, EPAR5TRS_V1 (or EPAR5TRSQC_V1) and EPAR5BAT_V1 files. The cross check function should only be used on these files. The function checks for the following:

EPAR5SMP_V1 against EPAR5TSR_V1 (or EPAR5TSRQC_V1):

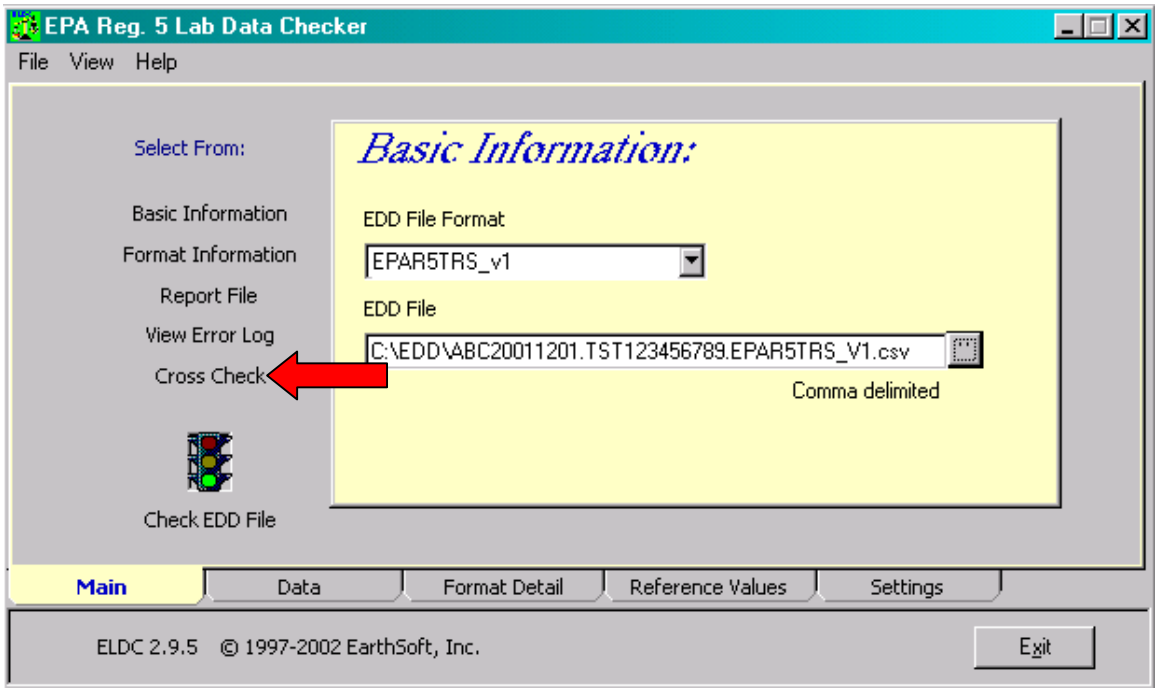
- Checks for samples with no matching tests/results
- Checks for test/results with no matching samples

EPAR5TSR_V1 (or EPAR5TSRQC_V1) against EPAR5BAT_V1:

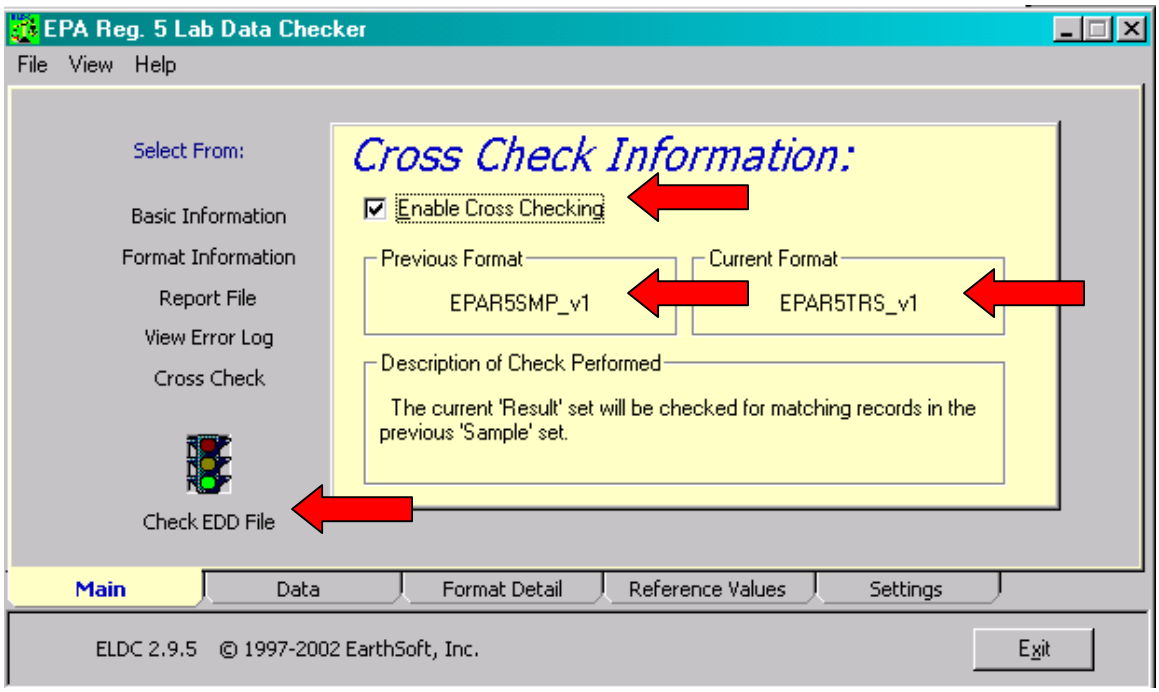
- Checks for tests with no matching batches
- Checks for batches with no matching tests

In order for the cross check function to work, the two files to be checked must be run through the ELDC in consecutive order (i.e., one directly after the other). For example, to cross check the EPAR5SMP_V1 file against the EPAR5TSR_V1 file, the EPAR5SMP_V1 file must be checked through the ELDC prior to running the

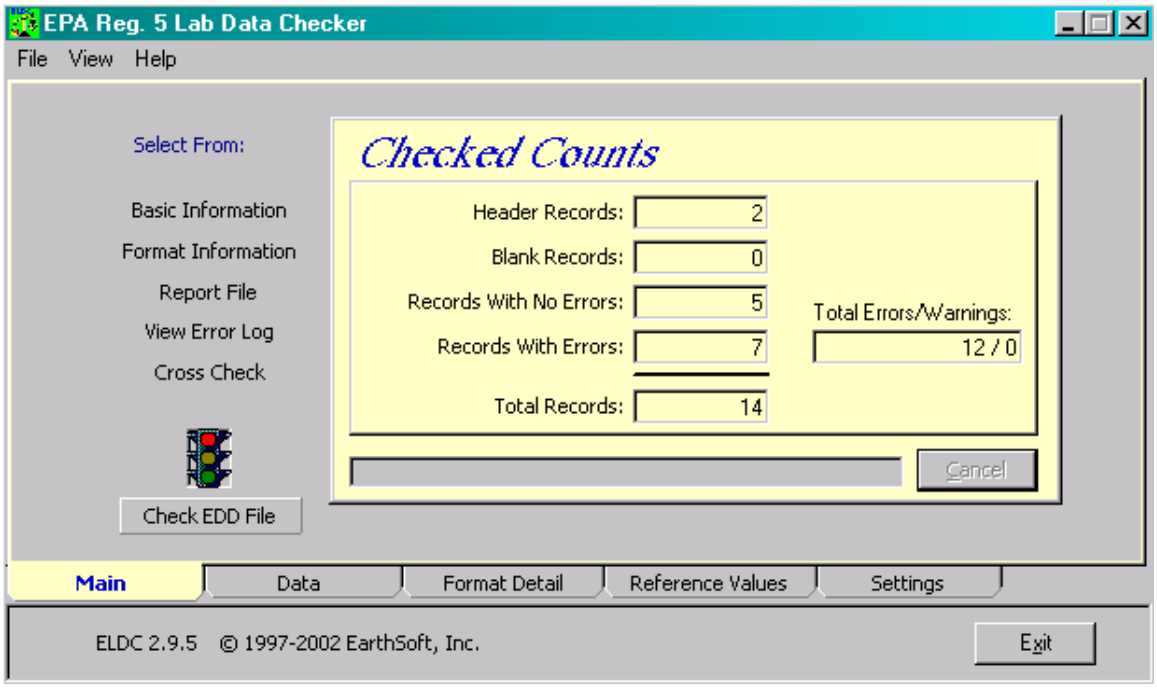
EPAR5TRS_V1 file. The EPAR5TRS_V1 file is then imported into the ELDC, the "Cross Check" function enabled, and then the ELDC checking process is begun.



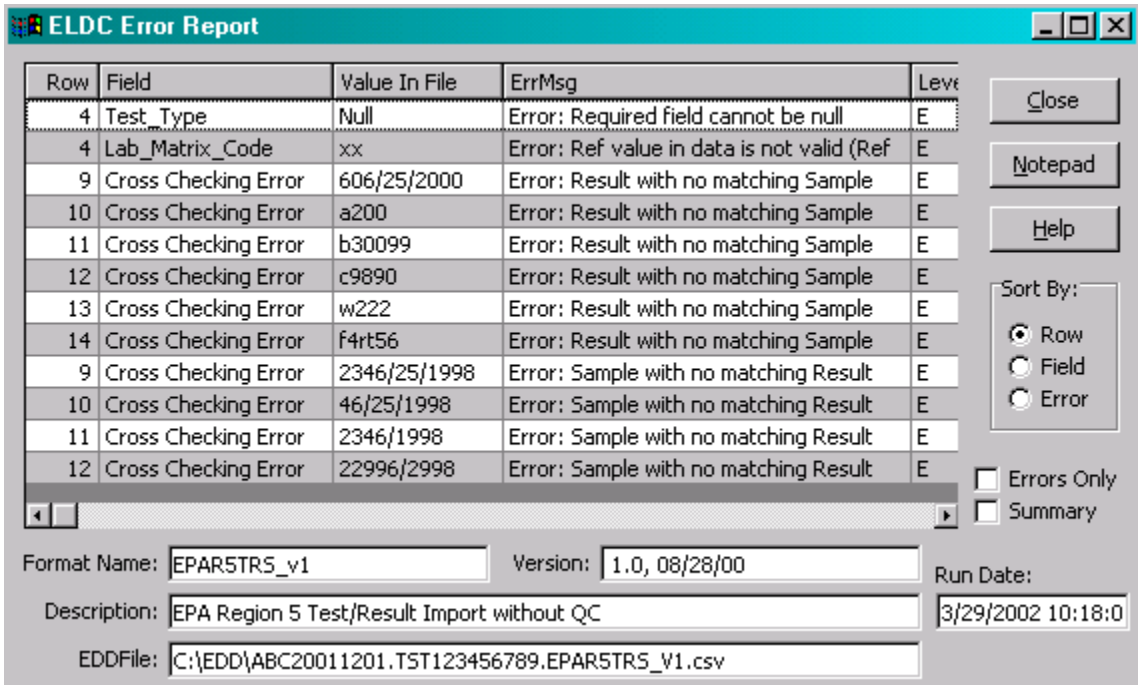
The above screen shows the ABC20011201.TST123456789.EPAR5TRS_V1.csv file ready to be checked. The ABC20011201.TST123456789.EPAR5**SMP**_V1.csv file was checked previous to this file. Select the "Cross Check" button.



The “Cross Check Information” window appears showing the two file formats that will be cross checked as well as a description of the check to be performed. Click the “Enable Cross Checking” box. Click on the “Check EDD File” button to start the ELDC checking process.



The “Checked Counts” will appear after the ELDC has completed its checks. The above screen shows that 5 rows were found to have errors. Select “View Error Log”.



The ELDC Error Report shows the errors detected in the file. Two errors were detected in row 4: the test_type field must have a value (i.e., Error: Required field cannot be null) and the value in the Lab_Matrix_Code field does not match a valid reference value (Error: Ref value in data is not valid). The remaining errors were caused by missing parent/child records. Rows 9 through 14 are records in the EPAR5TRS_V1 file (i.e., child records) that have no associated sample in the EPAR5SMP_V1 file (i.e., parent records). The last four errors (the second rows 9 through 12) have sample records in the EPARSMP_V1 file but have no associated test/result records in the EPAR5TRS_V1 file.

To view and save the error report, click the "Notepad" button. To return the "Basic Information" window, close the "ELDC Error Report" window and then select the "Basic Information" button on the "Checks Count" window.

USING THE EFDC

The files listed in Table 2 are checked through the EFDC in the same manner as the ELDC. The only exception is that no Cross Checks are performed on any of the EFDC files.

CORRECTING ERRORS

If the ELDC or EFDC detect errors in the EDD file, the error report should be used to identify the record with the error and the reason for the error. After the errors are corrected, the ELDC and EFDC should be re-run to assure that no errors remain. If error messages remain because new valid value codes are required, the files should be considered clean and reported to EPA with the new codes clearly explained in the transmittal form that accompanies the EDD submittal.

Periodically, EPA Region 5 posts a .DAT file on the EDMAN website that contains all of the accepted valid values to date. This file can be used to update the valid values used in both the ELDC and EFDC. Instructions for accomplishing this update can be found below in the "Updating ELDC and EFDC Valid Values" section.

United States Environmental Protection Agency

"...to protect human health and to safeguard the natural environment..."

Region 5
Superfund Division
77 West Jackson Blvd.
Chicago, Il 60604-3590

Data Provider Electronic Site and Lab Data Transmittal

Data Provider:

Firm Name:	
Firm Street Address	
Firm City, State & Zip	
Point of Contact Name	
Point of Contact Telephone	
Point of Contact E-Mail	

Site Identification:

EPA Site Title	*SiteName*	
EPA Site Number	*EPAIDCode*	
Site Address		

Comments Relating to this Data:

United States Environmental Protection Agency

"...to protect human health and to safeguard the natural environment..."

Region 5
Superfund Division
77 West Jackson Blvd.
Chicago, Il 60604-3590

Data Provider Electronic Site and Lab Data Transmittal

Electronic Data Information:

Data Reporting Period	
Type of Submission	[ ] – Initial [ ] – Revised (Revision #_____)

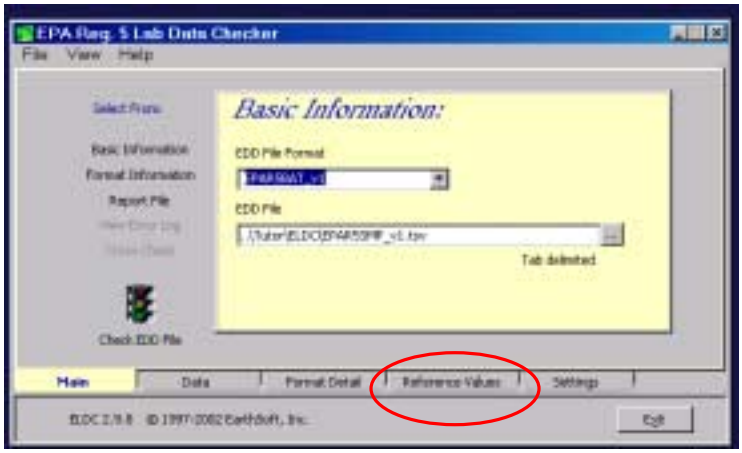
Electronic Data Included with this letter: *(check files being submitted)*

☑	File Type	File Contents	EDD File Name	Submission Type
	Initial	Base Map	*SiteName*.DXF	Initial
	Initial	Site	*SiteName*Date.*EPAIDCode*.EPAR5SITE_v1.txt	Initial
	Initial	Location	*SiteName*Date.*EPAIDCode*.EPAR5LOC_v1.txt	Initial
	Chemistry	Field Measurements	*SiteName*Date.*EPAIDCode*.EPAR5CFM_v1.txt	Recurring
	Chemistry	Sample	*SiteName*Date.*EPAIDCode*.EPAR5SMP_v1.txt	Recurring
	Chemistry	Test/Results	*SiteName*Date.*EPAIDCode*.EPAR5TRS_v1.txt	Recurring
	Chemistry	Test/Results QC	*SiteName*Date.*EPAIDCode*.EPAR5TRSQC_v1.txt	Recurring
	Chemistry	Batch	*SiteName*Date.*EPAIDCode*.EPAR5BAT_v1.txt	Recurring
	Chemistry	Water Level	*SiteName*Date.*EPAIDCode*.EPAR5GWTR_v1.txt	Recurring
	Geology	Drill Activity	*SiteName*Date.*EPAIDCode*.EPAR5DRA_v1.txt	Original
	Geology	Lithology	*SiteName*Date.*EPAIDCode*.EPAR5LTH_v1.txt	Original
	Geology	Well	*SiteName*Date.*EPAIDCode*.EPAR5WEL_v1.txt	Original
	Geology	Well Construction	*SiteName*Date.*EPAIDCode*.EPAR5WSG_v1.txt	Original
	Geology	Geology Samples	*SiteName*Date.*EPAIDCode*.EPAR5GSMP_v1.txt	Original
	Geology	Water Level	*SiteName*Date.*EPAIDCode*.EPAR5GWTR_v1.txt	Original
	Geology	Water Table	*SiteName*Date.*EPAIDCode*.EPAR5TBL_v1.txt	Original
	Geology	Down Hole Point (CPT) Data	*SiteName*Date.*EPAIDCode*.EPAR5DHP_v1.txt	Original

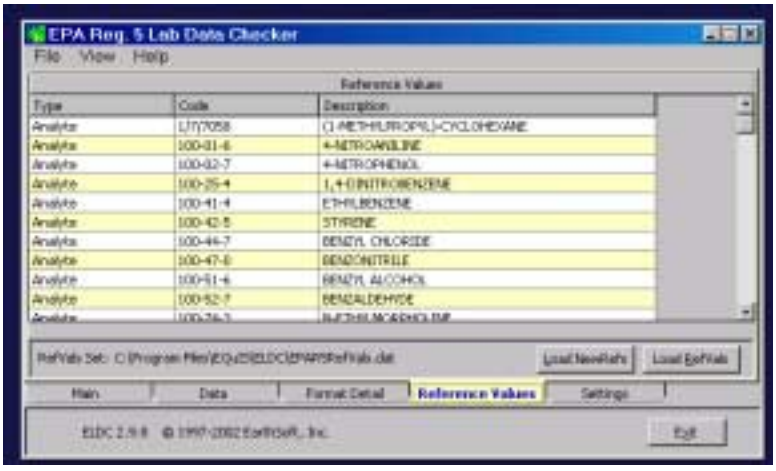
Updating ELDC and EFDC Valid Values

At the onset of the EDMAN project, EPA Region 5 attempted to encompass all possible valid values in its database. Due to the difficulty of this task, the list is incomplete and valid values must periodically be added via the data providers' request. Once a significant number of new valid values are accepted by EPA Region 5, the agency will create a .DAT file that contains the most current list valid values, which can be used to update the ELDC and EFDC programs. The file will be posted on the EDMAN website (http://www.epa.gov/region5/superfund/edman/) and available for downloading. This update process is especially important if data providers consistently receive ELDC/EFDC error messages due to valid value codes.

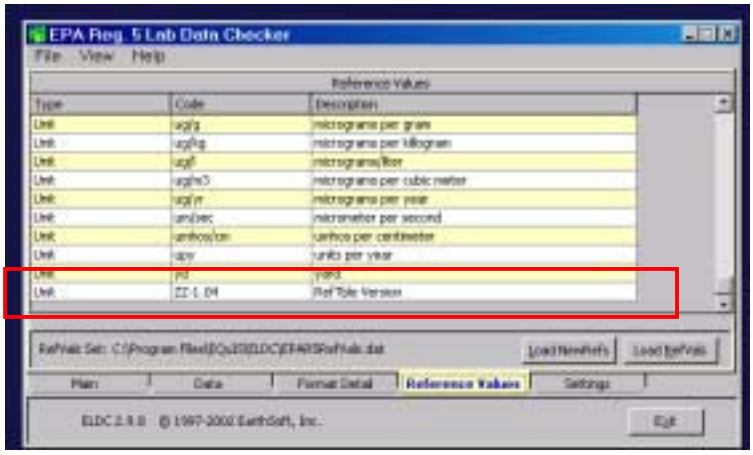
The first step in the process is to ensure that an update is actually required. This check can be accomplished by comparing the version of valid values currently used in the ELDC or EFDC to that of the .DAT file available on the web site. To do this, select the "Reference Values" tab in the ELDC or EFDC program.



The following screen should appear with a list of the program's valid values.



Move to bottom of the list by using the scroll bar on the right hand side of the screen. The last entry will be the version number. In the screen below the version is 1.04.



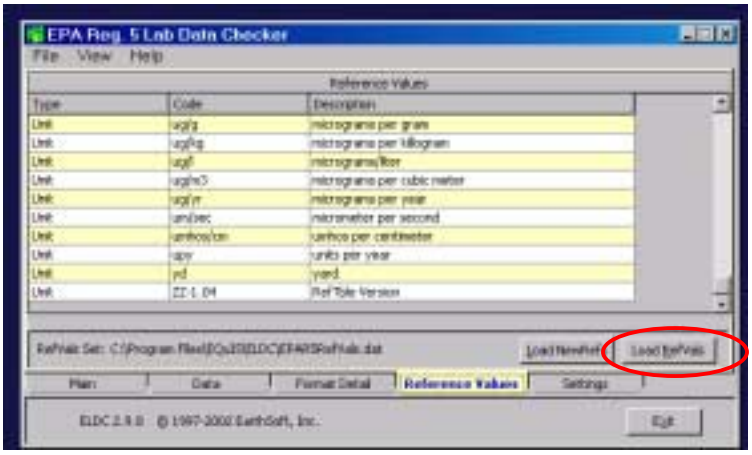
The version number of the .DAT file posted on the EDMAN web site will be available in the name of the file. The .DAT files for both the ELDC and FDLC will adhere to the following naming convention, respectively:

R5ELDC_V#.dat
R5FDLC_V#.dat

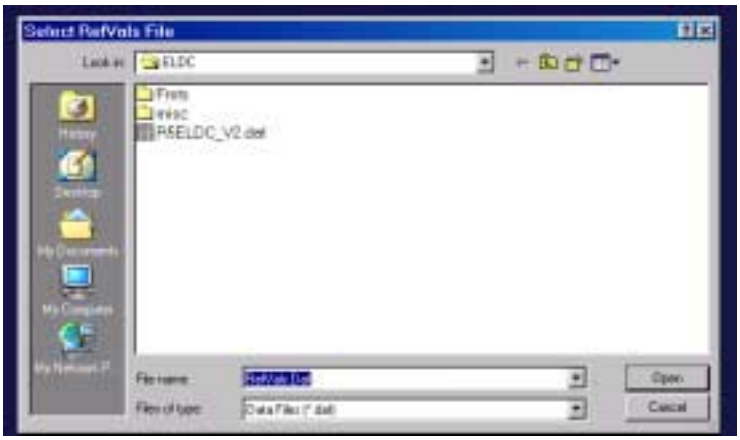
where # represents the version number.

If the version number in the file name is greater than the version number in the ELDC or FDLC, then an update is required. The .DAT file must first be downloaded from the web site and saved in a convenient location. It is suggested that the .DAT file be saved in the same directory as the ELDC and FDLC programs, though this is not necessary.

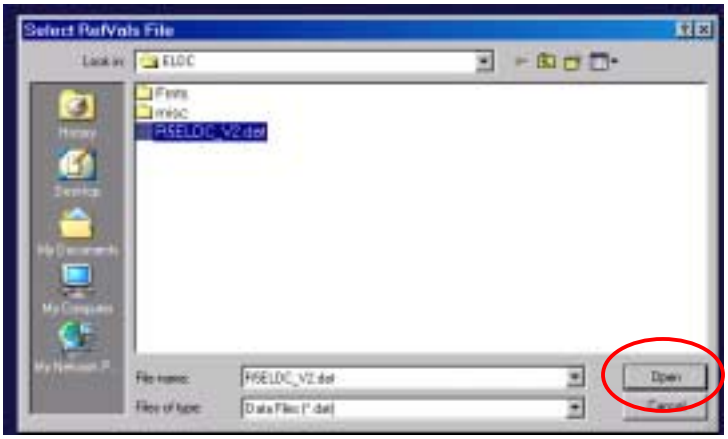
Once the download is complete, make sure that the “Reference Values” tab is selected and push the “Load RefVals” button on the bottom right hand side of the screen.



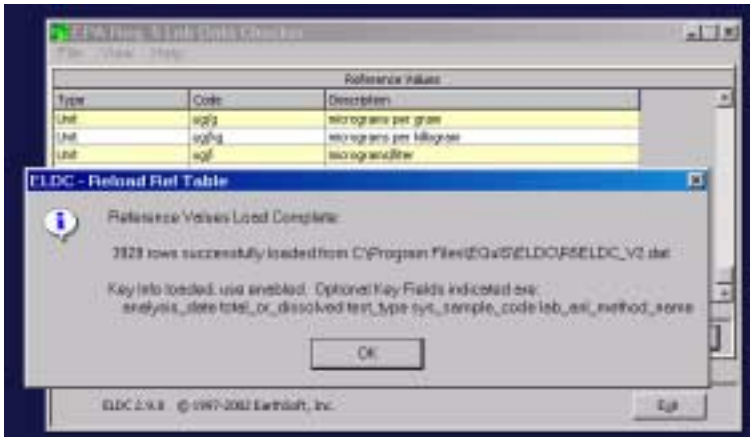
A browser window will appear. Use this window to navigate to the location where the .DAT file was saved.



Select the appropriate .DAT file and push the “Open” button. In the figure below the file is titled, R5ELDC_V2.dat



The updated valid value list will load into the ELDC or FDLC, and the following message will appear once the process is completed.



Push the “OK” button to close the message screen. The valid value update is complete.